

Anti-GRP94 Monoclonal Antibody

Catalog Number: M02393-2

About GRP94

Grp94 (glucose regulated protein 94, gp96) is a constitutively expressed endoplasmic reticulum (ER) luminal protein that is up-regulated in response to cellular stress such as heat shock, oxidative stress or glucose depletion. Grp94 is thought to play a role in protein translocation to the ER, in their subsequent folding and assembly, and in regulating protein secretion (1). Grp94 also plays a role in antigen presentation by accessing the endogenous pathway and eliciting specific CTL responses to chaperone bound peptides via MHC class I pathway (2). Grp94 is a member of the HSP90 family of stress proteins and shares sequence homology with its cytosolic equivalent, HSP90 (3). Both HSP90 and Grp94 are calcium binding proteins (4). Despite sharing 50% sequence homology over its N domains and complete conservation in its ligand binding domains with HSP90, Grp94 and HSP90 differ in their interactions with regulatory ligands as Grp94 has weak ATP binding and hydrolysis activity (5). Grp94 exists as a homodimer and the two subunits interact at two distinct intermolecular sites, C terminal dimerization domains and the N-terminal interacts with the middle domain of opposing subunits (6). Grp94 contains a carboxy terminal KDEL (Lys-Asp-Glu-Leu) sequence which is believed to aid in its retention in the ER (7).

Overview

Product Name	Anti-GRP94 Monoclonal Antibody
Reactive Species	Bovine, Chicken, Dog, Guinea pig, Hamster, Human, Monkey, Mouse, Pig, Rabbit, Rat, Sheep, Xenopus, Horse
Description	Boster Bio Anti-GRP94 Monoclonal Antibody catalog # M02393-2. Tested in IP, IF, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IP, IF, ICC, WB
Clonality	Monoclonal 9G10
Formulation	PBS pH7.2, 50% glycerol, 0.09% sodium azide
Storage Instructions	Store at -20°C for one year. Avoid repeated freeze-thaw cycles.
Host	Rat
Uniprot ID	P14625

Technical Details

Immunogen	Purified Grp94 isolated from chicken oviducts
Cross Reactivity	Detects ~98kDa. Does not detect human HSP90, Grp74, or GrpE from E.coli.
Isotype	IgG2a
Form	liquid

Concentration	1 mg/ml
Purification	Protein G Purified
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>WB (1:2000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.</p>

Anti-GRP94 Monoclonal Antibody (M02393-2) Images

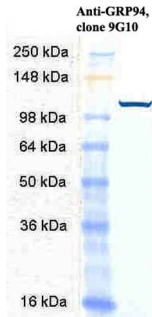
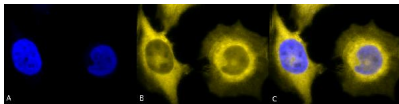


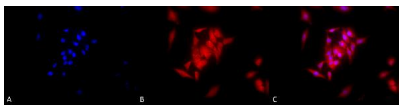
Figure 3. Western blot analysis of HSP90B1 using anti-HSP90B1 antibody (M02393-2).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-HSP90B1 antigen affinity purified polyclonal antibody (Catalog # M02393-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-Rat IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # SA1025) with Tanon 5200 system. A specific band was detected for HSP90B1.



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10 (M02393-2). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody (M02393-2) at 1:100 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rat (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP94 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-GRP94 Monoclonal Antibody, Clone 9G10 (M02393-2). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-GRP94 Monoclonal Antibody (M02393-2) at 1:100 for 12 hours at 4°C. Secondary Antibody: APC Goat Anti-Rat (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-GRP94 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.

1 Publications Citing This Product

1. PubMed ID: 27738755, Ibutilide protects against cardiomyocytes injury via inhibiting endoplasmic reticulum and mitochondrial stress pathways

Visit bosterbio.com/anti-grp94-antibody-m02393-2-boster.html to see all 1 publications.

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